



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,680	02/20/2004	Yoshitaka Asou	52469-0100	6994
21611 7590 10/31/2007 SNELL & WILMER LLP (OC) 600 ANTON BOULEVARD SUITE 1400 COSTA MESA, CA 92626			EXAMINER ZHENG, LOIS L	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/783,680	Applicant(s) ASOU ET AL.	
	Examiner Lois Zheng	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2 October 2007 has been entered.

Status of Claims

2. Claims 1-4 and 7 are amended in view of applicant's amendment filed 4 September 2007. Therefore, claims 1-7 are currently under examination.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claims recite "a transparent conversion coating" as a finishing treatment. However, the instant specification does not mention whether or not the

Art Unit: 1793

conversion coating produced by the finishing treatment is transparent. In addition, JP 8-983 provided by the applicant is not sufficient to show that the conversion coating produced by the claimed finishing treatment is transparent because JP 8-983 teaches that a film of "trivalent chrome, silica and phosphoric acid is very transparent" but the instant specification does not mention the presence of phosphoric acid in the finishing treatment.

Therefore, the newly amended term "transparent" constitutes new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/07902(WO'902), in view of JP 8-983(JP'983), and further in view of Bradley US 5,704,995 A(Bradley).

WO'902 teaches a method of treating steel surfaces, comprising:

- a. Plating the steel surface with zinc (page 13, first paragraph),
- b. Activating the zinc plated surface with nitric acid containing solution (page 13, first paragraph),
- c. Rinsing the activated zinc plated surface (page 13, first paragraph),
- d. Treating the activated zinc plated surface with a trivalent chromium containing solution to form a black coating that is free of hexavalent chromium,

Art Unit: 1793

wherein the Cr(III) solution further comprises iron and silica (page 8, last two paragraphs),

e. Rinsing the Cr(III) treated zinc plated surface (page 13, first paragraph),

f. Treating the Cr(III) treated zinc plated surface with a silica containing solution (page 9, first paragraph; page 10, second paragraph; page 13, first paragraph), and

g. Drying the Cr(III) treated zinc plated surface (page 13, first paragraph)

However, WO'902 does not teach that its second conversion treatment step (i.e. treatment using a silica containing solution) uses a solution comprising trivalent chromium and silica and produces a transparent coating as claimed.

JP'983 teaches treating zinc plated surfaces with a coating solution comprising trivalent chromium, silica, phosphoric acid and metal ions such as cobalt, wherein the treatment method process produces a transparent conversion coating with excellent anti-corrosion properties and improved appearance (abstract, col. 2, lines 2-5; col. 3 lines 42-44, col. 8 lines 7-8).

Bradley teaches a method for forming a black coating on a metal surface, wherein after the metal surface is treated with a blackening solution, the metal surface is further treated with a Cr(III) containing solution for enhanced corrosion resistance (col. 2 line 58 – col. 3 line 7).

Regarding claims 1 and 4-6, it would have been obvious to one of ordinary skill in the art to have incorporated the coating treatment as taught by JP'983 into the second

Art Unit: 1793

conversion treatment step of WO'902 in order to enhance corrosion resistance and improve appearance as taught by Bradley and JP'983.

7. Claims 2-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'902 in view of JP'983 and Bradley, and further in view of Hartley et al. US 4,243,434(Hartley).

The teachings of WO'902 in view of JP'983 and Bradley are discussed in paragraph 6 above. However, WO'902 in view of JP'983 and Bradley do not explicitly teach the additional treatment step with a solution comprising trivalent chromium and silica prior to the black coating step.

Hartley teaches coating of metal working tools with a chromium containing coating solution(abstract). Hartley further teaches that multiple coating applications can be carried out when thicker coating is desired(col. 2 lines 29-33). Based on the thickness produced by Hartley's single coating layer(0.0001 or 0.0002 inch) and final desired thicker coating layer(0.001 inch), the coating treatment have to be repeated for at least five times to reach the desired coating thickness.

Regarding claims 2 and 7, one of ordinary skill in the art would have found it obvious to have repeated the black coating forming and rinsing steps in the process of WO'902 in view of JP'983 and Bradley in order to achieve a desired thicker black coating as taught by Hartley. In addition, since the black coating treatment step of WO'902 in view of JP'983, Bradley and Hartley comprises Cr(III), silica and iron, the repeated black coating forming steps in the process of WO'902 in view of JP'983, Bradley and Hartley meet the limitations of the first black coating step using a solution

Art Unit: 1793

comprising Cr(III) and silica and the second black coating step using a solution comprising Cr(III) and iron as claimed.

Regarding claim 3, one of ordinary skill in the art would have also found it obvious to have repeated the transparent coating forming step of WO'902 in view of JP'983, Bradley in order to achieve desired transparent coating thickness as taught by Bradley. In addition, since the transparent coating treatment step of WO'902 in view of JP'983, Bradley and Hartley comprises Cr(III), silica and cobalt, the repeated transparent coating forming steps in the process of WO'902 in view of JP'983, Bradley and Hartley meet the limitations of the initial finish treatment step using a solution comprising Cr(III) and silica and the final finish treatment step using a solution comprising silica and cobalt as claimed.

Response to Arguments

8. Applicant's arguments with respect to claims 1-7 filed 4 September 2007 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

ROY KING
SUPERVISORY ENGINEER
PAT. & TRADE MARK OFFICE